

## CLAIMS

What is claimed is:

- 1     1.     A communications network comprising:  
2             at least one communication virtualizer;  
3             a plurality of network-attached store computers connected to said communication  
4 virtualizer, wherein said plurality of network-attached store computers are configured to  
5 appear as a single available network-attached store computer; and  
6             at least one client computer connected to said communication virtualizer.
  
- 1     2.     The communications network of claim 1, further comprising an internal network of  
2 connection nodes connecting said communication virtualizer with said network-attached  
3 store computers.
  
- 1     3.     The communications network of claim 1, further comprising a plurality of external  
2 network connections for facilitating a transfer of requests sent by said client computer to said  
3 communication virtualizer.
  
- 1     4.     The communications network of claim 1, further comprising a plurality of external  
2 connection paths for facilitating direct communication between said network-attached store  
3 computers and said client computer.

1     5.     The communications network of claim 1, further comprising an Ethernet networking  
2 hardware and medium access protocol for facilitating communication within said  
3 communication network.

1     6.     The communications network of claim 1, further comprising a Transmission Control  
2 Protocol / Internet Protocol suite for facilitating communication between said network-  
3 attached store computers and said client computer.

1     7.     The communications network of claim 1, further comprising a storage access protocol  
2 for facilitating communication between a storage component within said communications  
3 network and remaining components within said communications network.

1     8.     The communications network of claim 7, further comprising a storage access protocol  
2 comprises a Network File System protocol.

1     9.     The communications network of claim 7, further comprising a storage access protocol  
2 comprises a Common Internet File System protocol.

1     10.    The communications network of claim 1, wherein said communication virtualizer  
2 comprises a network router.

1     11.    The communications network of claim 1, further comprising a communication

2 virtualizer file switch connected to a client computer and a server computer for sending  
3 requests from said client computer to said network-attached store and from said network-  
4 attached store back to said client computer.

1 12. A method of communication over a communications network, said method  
2 comprising:  
3 sending requests for storage originated by at least one client computer over said  
4 communications network;  
5 receiving said requests for storage in at least one communication virtualizer; and  
6 transmitting the received requests for storage to a plurality of network-attached store  
7 computers connected to said communication virtualizer, wherein said plurality of network-  
8 attached store computers are configured to appear as a single network-attached store  
9 computer.

1 13. The method of claim 12, wherein said communication virtualizer, upon receiving  
2 requests from said client computer, transmits said request for storage to a chosen network-  
3 attached store computer based on a capability of said chosen network-attached store  
4 computer to properly process said request for storage.

1 14. The method of claim 12, wherein said requests for storage are transmitted as a series  
2 of packets, each packet comprising a portion of the request for storage, and wherein each  
3 packet comprises a packet sequence number.

1 15. The method of claim 14, wherein said packets comprising a similar request for  
2 storage are linked together using a request identifier and said packet sequence number,  
3 wherein each request for storage comprises a unique request identifier that is shared among  
4 said packets comprising said similar request.

1 16. The method of claim 12, wherein said network-attached store computer is configured  
2 for:  
3 receiving said requests for storage from said communication virtualizer;  
4 processing said request for storage;  
5 creating a corresponding response to said request for storage;  
6 packetizing said corresponding response; and  
7 sending said corresponding response to said communication virtualizer.

1 17. The method of claim 16, wherein said communication virtualizer is configured for:  
2 receiving said corresponding response from said network-attached store computer;  
3 determining a chosen client computer to which said corresponding response should be  
4 routed to; and  
5 routing said corresponding response to a chosen client computer.

1 18. The method of claim 17, wherein said chosen client computer is configured for:  
2 receiving said corresponding response from said communication virtualizer;

3 de-packetizing said corresponding response; and  
4 routing said corresponding response to an initiating application.

1 19. The method of claim 15, wherein said packets are categorized from a zeroth (0th)  
2 packet to an *i*th packet.

1 20. The method of claim 19, wherein said communication virtualizer determines which  
2 network-attached store computer to transmit said request for storage to by examining said  
3 zeroth packet in said request.

1 21. The method of claim 19, further comprising:  
2 said client computer sending standard Ethernet packets to said communication  
3 virtualizer; and  
4 said communication virtualizer combining a plurality of standard Ethernet packets  
5 comprising a single request for storage into a single standard Ethernet packet.

1 22. The method of claim 21, further comprising:  
2 said network-attached store computer sending a standard Ethernet packet to said  
3 communication virtualizer in reply to a client computer request; and  
4 said communication virtualizer dividing said standard Ethernet packet into a plurality  
5 of standard Ethernet packets to send to said client computer as a response comprising  
6 multiple standard Ethernet packets.

1    23.    A system for facilitating communication between a client computer and a host  
2    computer, said system comprising:  
3            means for sending requests for storage originated by at least one client computer over  
4    said communications network;  
5            means for receiving said requests for storage in at least one communication  
6    virtualizer; and  
7            means for transmitting the received requests for storage to a plurality of network-  
8    attached store computers connected to said communication virtualizer, wherein said plurality  
9    of network-attached store computers are configured to appear as a single network-attached  
10   store computer.